

Abstract

In an IP-based cellular telecommunications network, such as for example in a Code Division Multiple Access (CDMA) 2000 cellular telecommunications network, a method, a system and a Packet Data Serving Node (PDSN) for registering a Mobile Node (MN) with the PDSN. Once a Point-to-Point Protocol (PPP) connection is established between the MN and the PDSN, a PPP timer is started, the PPP timer being set to expire after a predetermined period of time. A Mobile Internet Protocol (MIP) registration takes place between the MN and the PDSN. The PDSN detects if the MIP registration is successful and if so, resets the PPP timer to a substantially higher value and the PPP session continues until one of the involved parties terminates it. If the MIP registration is not successful, the PDSN further detects if a new MIP registration request is received before the expiration of the predefined period of time, and if so, the PDSN resets the PPP timer again to the predefined period of time. Otherwise, if a new MIP registration request is not received before the timer expiration, the PDSN terminates the PPP connection. The PDSN comprises the PPP timer, an RP stack for supporting an RP connection, a PPP stack activated for the duration of the PPP connection, and a foreign agent for performing the MIP registration of the MN, which may be implemented using software or hardware modules, or a combination thereof.